



FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION**

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Sheet 1 of 6

ATTORNEY DOCKET NO.

SERIAL No.

1736-000001/REC

10/643,673

APPLICANT

Hyon et al.

FILING DATE

GROUP

August 19, 2003

~~3864~~ 1711**U.S. PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.	AB	3,886,056*	05/27/1975	Kitamaru et al.		
2.		4,224,696*	09/30/1980	Murray et al.		
3.		4,587,163*	05/6/1986	Zachariades		
4.		4,636,340*	01/13/1987	Itaba et al.		
5.		4,655,769*	4/7/1987	Zachariades		
6.		4,747,990*	5/31/1988	Gaussens et al.		
7.		5,030,402*	7/9/1991	Zachariades		
8.		5,030,487*	7/9/1991	Rosenzweig		
9.		5,066,755*	11/19/1991	Lemstra		
10.		5,130,376*	7/14/1992	Shih		
11.		5,276,079*	1/4/1994	Duan et al.		
12.		5,358,529*	10/25/1994	Davidson		
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14.		5,428,079*	6/27/1995	Bastiaansen et al.		
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18.		3,956,253	5/11/1976	Braun		
19.		4,055,862	11/1/1977	Farling		
20.		4,171,338	10/16/1979	Mason		
21.	AB	4,281,420	8/4/1981	Raab		

Examiner:

*Susan Berman*

Date Considered:

12-28-04

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22.	AB	4,582,656	4/15/1986	Hoffman		
23.		5,200,439	4/6/1993	Asanuma		
24.		5,210,130	5/11/1993	Howard, Jr.		
25.		5,414,049	5/9/1995	Sun et al.		
26.		5,439,949	8/8/1995	Lucas et al.		
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35.		6,165,220	12/26/2000	McKellop et al.		
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40.		6,365,089 B1	4/2/2002	Krebs et al.		
41.	AB	6,458,727 B1	10/1/2002	Jones et al.		

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*Susan Berna*

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~~3864~~ 1711**U.S. PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
42.	AB	2002/0125614 A1	09/12/02	King et al.		
43.		2002/0037944 A1	03/28/02	Shen et al.		
44.		2003/0119935 A1	06/26/03	Merrill et al.		
45.		6,494,917 B1	12/17/02	McKellop et al.		
46.		6,355,215 B1	03/12/02	Poggie et al.		
47.		2002/0107300 A1	08/08/02	Saum et al.		
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49.		2003/0045603 A1	03/06/03	Salovey et al.		
50.		2003/0130743 A1	07/10/03	Scott et al.		
51.		2003/0149125 A1	08/07/03	Muratoglu et al.		
52.		6,048,480	04/11/00	Doyle		
53.	AB	6,146,426	11/14/00	Doyle		

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1.	AB	JP 57-211347	12/25/1982	Japan		X	
2.		JP 91 22222	5/13/1997	Japan		Abstract	
3.		WO 95/06148*	3/2/1995	PCT			
4.		WO 98/01085	1/15/1998	PCT			
5.	AB	JP 62 243634	10/24/1987	Japan		Abstract	

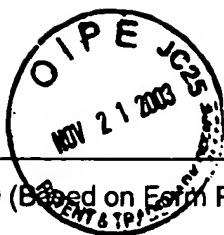
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Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No
6.	AB	JP 4-198201	7/17/1992	Japan		Abstract	
7.		EP 0 729 981 A1	9/4/1996	Europe			
8.		JP 5-507748	11/4/1993	Japan		Abstract	
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3.		Kang et al., "The Radiation Chemistry of Polyethylene. IX. Temperature Coefficient of Cross-Linking and Other Effects," Journal of the American Chemical Society, Vol. 89:9, April 26, 1967, pp. 1980-1986.
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5.		Kitamura, R. et al., Structure and Properties of Lightly Crosslinked Crystalline Polymers Crystallized or Processed under Molecular Orientation, Journal of Polymer Science: Macromolecular Reviews, vol. 14, 1979, pp. 207-264.*
6.		Kitamura, R. et al., "Size and Orientation of Crystallites in Lightly Cross-linked Polyethylene, Crystallized from the Melt Under Uniaxial Compression," Die Makromolekulare Chemie, vol. 175, 1974, pp. 255-275.*
7.	AB	O'Neill et al., "The distribution of oxidation products in irradiated ultra-high molecular weight polyethylene," Polymer Degradation and Stability (Feb. 1995), pp. 239-244.

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~~3864~~ 1711**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

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8.	AB	Oonishi et al., "Effect of cross-linkage by gamma radiation in heavy doses to low wear polyethylene in total hip prostheses," Journal of Materials Science: Materials in Medicine 7 (1996), pp. 753-763.
9.		Oonishi et al., "The optimum dose of gamma radiation-heavy doses to low wear polyethylene in total hip prostheses," Journal of Materials Science: Materials in Medicine 8 (1997), pp. 11-18.
10.		Polymer Society, Polymer Functional Material Series-Medical Treatment Functional Material, Vol. 9, November 20, 1990, pp. 165-166.
11.		Polymer Society, Polymer New Material One Point-Medical Polymer Material, Vol. 20, February 20, 1989, pp. 45-46.
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15.		The American Academy of Orthopaedic Surgeons, "Polyethylene: The Past, Present and Future," 1999 Annual Meeting - Scientific Program, February 5, 1999, <a href="http://www.aaos.org/wordhtml/anmett99/sciprogram/g.htm">www.aaos.org/wordhtml/anmett99/sciprogram/g.htm</a> (20 pages).
16.		The American Academy of Orthopaedic Surgeons, "Researchers get awards for orthopaedic research," News Release, March 19, 1998, <a href="http://www.aaos.org/wordhtml/press/98press/kappa.htm">www.aaos.org/wordhtml/press/98press/kappa.htm</a> (4 pages).
17.		The American Academy of Orthopaedic Surgeons, "Researchers to get Kappa Delta awards for achievements," Academy News, March 19, 1998, <a href="http://www.aaos.org/wordhtml/98news/kappa.htm">www.aaos.org/wordhtml/98news/kappa.htm</a> (3 pages).
18.	AB	Tribology Laboratory information sheet and curriculum vitae for Drs. McKellop and Shen, <a href="http://www.orthohospital.org/research/Tribology%20Lab">www.orthohospital.org/research/Tribology Lab</a> (5 pages).

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**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)**

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19.	<i>AB</i>	Wilson et al., "Proton Modification of Ultra High Molecular Weight Polyethylene to Promote Crosslinking for Enhanced Chemical and Physical Properties," Materials Research Society Symposium Proceedings, Vol. 396 (1995), pp. 311-316.

\* Indicates previously cited in original U.S. Patent 6,168,626.

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